

NEW HAMPSHIRE WATER SUPPLY AND POLLUTION CONTROL COMMISSION

LAKE TROPHIC DATA

MORPHOMETRIC:

LAKE _____ Katherine, Lake	LAKE AREA (HA) _____ 15.01
TOWN _____ Piermont	MAXIMUM DEPTH (M) _____ 6.4
COUNTY _____ Grafton	MEAN DEPTH (M) _____ 3.5
RIVER BASIN _____ Connecticut	VOLUME (M ³) _____ 528,000
LATITUDE _____ 43° 59'N	MUD SURFACE AREA (HA) _____ 14.78
LONGITUDE _____ 71° 59'W	RELATIVE DEPTH _____ 1.5
ELEVATION (FT) _____ 1339	SHORE CONFIGURATION _____ 1.31
SHORE LENGTH (M) _____ 1800	AREAL WATER LOAD (M/YR) _____ 6.87
WATERSHED AREA (HA) _____ 212.4	FLUSHING RATE (YR ⁻¹) _____ 2.0
% WATERSHED PONDED _____ 0%	PHOSPHORUS RETENTION COEFF. _____ 0.60

BIOLOGICAL:

DATE	11 FEB 1986	27 AUG 1985
DOM. PHYTOPLANKTON (% total) ¹	Mallomonas (75%)	Ceratium (35%)
²	Synura (15%)	Staurastrum (20%)
NUMBER OF ALGAL GENERA	8	11
SPECIES DIVERSITY		2.75
CHLOROPHYLL <u>a</u> (µg/L)		2.01
DOM. ZOOPLANKTON (% total) ¹	Nauplii larvae (55%)	Nauplii larvae (20%)
²		Holopedium (20%)
ROTIFERS/LITER	35	35
MICROCRUSTACEA/LITER	48	63
TOTAL ZOOPLANK. CNTS (cells/L)	83	98
VASCULAR PLANT ABUNDANCE		Scattered
DOMINANT VASCULAR PLANTS ¹		Eriocaulon
²		Myriophyllum
³		Equisetum
SECCHI DISK TRANSPARENCY (M)		6.3 VOB
BOTTOM DISS. OXYGEN (mg/L)	4.9	8.2
SEDIMENT: % ORGANIC MATTER		

LAKE TYPE: A natural pond raised by damming.

SUMMER THERMAL STRATIFICATION: YES _____ NO X WEAK _____

IF YES, VOLUME OF HYPOLIMNION _____ (m³) THERMOCLINE DEPTH _____ (m)

CHEMICAL: (mg/L unless indicated otherwise) LAKE: Katherine, Lake

	WINTER		SUMMER	
DATE	11 FEB 1986		27 AUG 1985	
DEPTH (M)	2.0	4.0	2.0	4.0
pH (UNITS)	6.5	6.4	7.0	6.9
ALKALINITY (I. P.)	4.8	5.7	5.7	5.7
ALKALINITY (F.E.P.)	6.6	7.4	7.1	7.1
NITRITE+NITRATE NITROGEN			< 0.05	< 0.05
TOTAL KJELDAHL NITROGEN			0.32	0.29
TOTAL PHOSPHORUS	0.007	0.004	0.011	0.011
SPEC. CONDUCT. (μ Mhos/cm)	36.6	39.1	35.3	34.9
APPARENT COLOR (UNITS)	20	20	15	15
TRUE COLOR (440 nm)(UNITS)	NR	17	8	10
MAGNESIUM			0.59	
CALCIUM			3.4	
SODIUM			< 3	
POTASSIUM			0.5	
CHLORIDE			< 2	< 2
TN : TP			29	26
INORG-N : INORG-P				
[Mg+Ca] : [Na+K]				
CALCITE SATURATION INDEX			3.0	

* = NOT DEFENSIBLE

NR = NO RESULT

TROPHIC CLASSIFICATION: 1985

CLASSIFICATION POINTS:

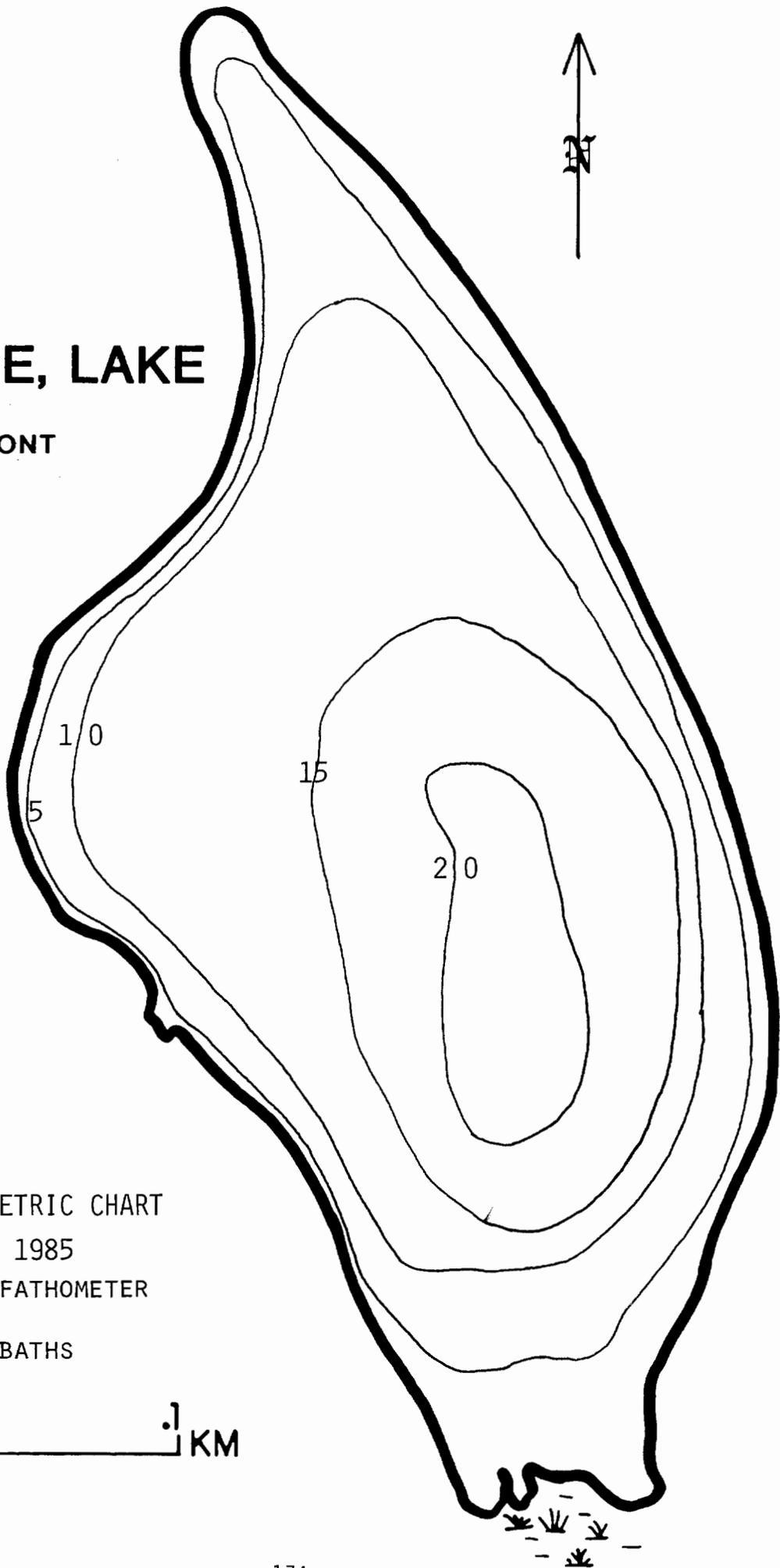
D.O.	S.D.	PLANT ABUND.	CHL a	TOTAL PTS.	TROPHIC CLASS.
-	0	1	0	1	Oligo.

COMMENTS:

1. Clear water with bottom rocks and plants covered with silt.
2. Poor access; drove across a field to get to the lake.

KATHERINE, LAKE

PIERMONT

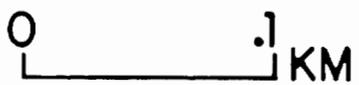


ROUGH BATHYMETRIC CHART

WSPCC - 1985

SOUNDED BY FATHOMETER

5 FT ISOBATHS



FIELD DATA SHEET

WATER BODY Katherine, Lake TOWN Piermont BY WSPCC
 DATE COLLECTED 27 August 1985 WEATHER Mostly cloudy; light breeze

STATION	DEPTH (M)	TEMP. (°C)	*DISSOLVED OXYGEN	OXYGEN: % SATURATION			
DEEP SPOT	0.1	20.8	8.7	97%			
	1.0	20.0	8.7	97%			
	2.0	20.0	8.7	97%			
	3.0	19.8	8.6	94%			
	4.0	19.8	8.5	93%			
	5.0	19.8	8.5	93%			
	6.0	19.8	8.2	91%			

SECCHI DISK (M) 6.3 V.O.B.
 BOTTOM DEPTH (M) 6.3
 TIME 1200 hrs.

COMMENTS: 1. Secchi disk was 'visible on bottom' at 6.3 meters.

* Dissolved oxygen values in mg/L - 175 -

KATHERINE, LAKE

PIERMONT

AQUATIC PLANTS
27 AUG 1985

